

REMARKS

This paper is responsive to any paper(s) indicated above, and is responsive in any other manner indicated below.

PENDING CLAIMS

Claims 1-6 and 8 were pending, under consideration and subjected to examination in the Office Action. Appropriate claims have been amended, canceled and/or added (without prejudice or disclaimer) in order to adjust a clarity and/or focus of Applicant's claimed invention. That is, such changes are unrelated to any prior art or scope adjustment and are simply refocused claims in which Applicant is present interested. At entry of this paper, Claims 1-6 and 8 will be pending for further consideration and examination in the application.

ALLOWED CLAIM(S)

Claim 8 has been allowed in the application, as indicated within the "Allowable Subject Matter" section on page 7 of the Office Action. Applicant and the undersigned respectfully thank the Examiner for such indication of allowable subject matter.

REJECTION UNDER 35 USC '103

The 35 USC '103 rejection of claims 1- 6 as being unpatentable over Sumida (U.S. Patent Pub 2007/0242698) in view of Abrol et al. (U.S. Patent 6,785,823) is respectfully traversed. However, such rejections have been rendered obsolete by the present clarifying amendments to Applicant's claims, and accordingly, traversal arguments are not appropriate at this time. However, Applicant respectfully submits the following to preclude renewal of any such rejections against Applicant's clarified claims. That is, insofar as any such rejection applies to Applicant's presently-clarified claims, Applicant respectfully submits the following.

All descriptions of Applicant's disclosed and claimed invention, and all descriptions and rebuttal arguments regarding the applied prior art, as previously submitted by Applicant in any form, are repeated and incorporated hereat by reference. Further, regarding any descriptions and rebuttal arguments concerning Applicant's invention and/or the applied prior art as included herein, yet found to be corrective over prior descriptions and rebuttal arguments, such corrective descriptions and rebuttal arguments should be considered to supersede prior descriptions and rebuttal arguments. Still further, all Office Action statements regarding the prior art rejections are respectfully traversed. As additional arguments, Applicant respectfully submits the following remarks from Applicant's foreign patent representative.

Regarding differences between the cited references and Applicant's present invention, **Applicant's invention** is characterized in the following operations in the NCP phase:

(a) PDSN does not send any NCP start request message, and instead waits to receive a NCP start request message from the terminal.

(b) When PDSN receives the NCP start request message from the terminal, PDSN refers to the protocol field of the received NCP start request message and decides the layer 3 protocol type of the terminal.

(c-1) PDSM sends a NCP connection permission message corresponding to the decided layer 3 protocol type and the NCP start request message of the decided layer 3 protocol type, to the terminal.

(c-2) As an alternative to (c-1), PDSN includes a statistic processing unit and sends a NCP connection permission message and a NCP start request of the statistically highly-used layer 3 protocol type, to the terminal based on the statistic processing result.

In the clarified claims and the present arguments, Applicant respectfully submits that the NCP connection permission message corresponds to IPv6CP Configure Ack packet, and the NCP start request message corresponds to IPv6CP Configure Request packet, as described in paragraphs [0008] and [0031] and Figs. 5A, 5B, 6 and 9 of this application's US-2007-0195758-A1 publication.

Turning now to **Sumida** (US2007/ 0242698), as described in paragraphs [0004] and [0005] of Sumida the process required for the PPP terminating equipment includes: (1) a link establishing process, and (2) a link maintaining process. The link maintaining process (2) includes a link normality confirming process. Sumida

speeds up the link normality confirming process, which responds to LCP echo requirement packet transmitted at intervals after the link establishment is completed.

In contrast, Applicant's present invention is for (1) the link establishing process, while Sumida is for (2) the link maintaining process, and Sumida does not mention anything concerning the link establishing process.

That is, Sumida's link maintaining process is a process after the layer 5 protocol type is determined. More particularly, Sumida determines whether the received packet is a LCP echo requirement packet, and sends the packet to the LCP echo response producing section (hardware component) if the packet is the LCP echo requirement packet. This structure speeds up the response process. If the received packet is not the LCP echo requirement packet, Sumida sends the packet to the processor for software processing (FIG. 5). Sumida shows to determine the type of the received packet and changes the destination of the received packet.

In contrast, Applicant's present invention refers to the protocol field of the received packet to determine the layer B protocol type, and transmits the response packet corresponding to the layer 3 protocol type.

To summarize, Applicant's present invention is different from Sumida in a working phase and contents of type, and a process after the type determination.

Next, Abrol (US 6,765,823) shows a method and system for performing authentication of a wireless mobile station with a packet data network.

More particularly, an existing authentication method (RFC1661) is not sufficient to authenticate the various mobile terminals in a radio network. Abrol provides an improved method (Column 2, lines 42 to 49).

RPC1661 prescribes a PPP connection sequence, that is, a LCP phase, user authentication phase and NCP phase. When PDSN receives a CHAP challenge response message from the mobile terminal, PDSN sends the message to the authentication server and sends the CHAP success message to the mobile terminal if the authentication succeeds.

Abrol works differently from the connection sequence of RFC1661. In Abrol, when PDSN receives a CHAP challenge response message from the mobile terminal, PDSN stores the message in a buffer instead of sending the message to the authentication server, and sends a CHAP success message to the mobile terminal while omitting the authentication phase. By this, the mobile terminal sends IPCP request message and PDSN can know from the received IPCP request message whether the mobile terminal requests the use of the IPCP mobile IP. Abrol performs the authentication process after knowing whether the mobile terminal requests the use of the IPCP mobile IP. If the mobile terminal requests the use of the mobile IP, the authentication is performed using the authentication technique of mobile IP. If the mobile terminal does not request the use of the mobile IP, the authentication is performed by sending the CHAP challenge response message stored in the buffer to the authentication server. IPCP is a NCP when the layer 3 protocol is IP.

In Abrol, PDSN waits to receive the IPCP request message. However, it is not for time-saving of a NCP phase process, but instead it is for authentication scheme determination, and Abrol process does not relate to any protocol type determination or any NCP phase.

To summarize, Applicant's present invention is different from Abrol in purpose, presumption (within RFC1661), working phase, and protocol type determination.

Regarding combination of teachings, Applicant respectfully submits that even if Sumida is combined with Abrol, the above-mentioned features (a), (b), and (c) cannot be accomplished (owing to the above-discussed deficiencies, and the combination of Sumida and Abrol cannot reduce the number of the layer B protocol negotiations, either.

No other previously-applied reference cures the major deficiencies mentioned above with respect to the above-discussed reference(s). Accordingly, it is respectfully submitted that the previously-applied and/or known references (whether taken individually, or in combination) would not have disclosed or suggested Applicant's claimed invention.

As a result of all of the foregoing, it is respectfully submitted that the applied art (taken alone and in the Office Action combinations) would not support a '103 obviousness-type rejection of Applicant's claims. Accordingly, reconsideration and withdrawal of such '103 rejection, and express written allowance of all of the '103 rejected claims, are respectfully requested.

EXAMINER INVITED TO TELEPHONE

The Examiner is herein invited to telephone the undersigned attorneys at the local Washington, D.C. area telephone number of 703/312-6600 for discussing any Examiner's Amendments or other suggested actions for accelerating prosecution and moving the present application to allowance.

RESERVATION OF RIGHTS

It is respectfully submitted that any and all claim amendments and/or cancellations submitted within this paper and throughout prosecution of the present application are without prejudice or disclaimer. That is, any above statements, or any present amendment or cancellation of claims (all made without prejudice or disclaimer), should not be taken as an indication or admission that any objection/rejection was valid, or as a disclaimer of any scope or subject matter. Applicant respectfully reserves all rights to file subsequent related application(s) (including reissue applications) directed to any/all previously claimed limitations/features which have been subsequently amended or cancelled, or to any/all limitations/features not yet claimed, i.e., Applicant continues (indefinitely) to maintain no intention or desire to dedicate or surrender any limitations/features of subject matter of the present application to the public.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully submits that the claims listed above as presently being under consideration in the application are now in condition for allowance.

To the extent necessary, Applicant petitions for an extension of time under 37 CFR '1.136. Authorization is herein given to charge any shortage in the fees, including extension of time fees and excess claim fees, to Deposit Account No. 01-2135 (Case No. 500.46545X00) and please credit any excess fees to such deposit account.

Based upon all of the foregoing, allowance of all presently-pending claims is respectfully requested.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP

/Paul J. Skwierawski/
Paul J. Skwierawski
Registration No. 32,173

PJS/slk
(703) 312-6600